Notes on *Acacia* (Leguminosae: Mimosoideae) chiefly from northern Australia

Les Pedley

Summary

Pedley, Les (1999). Notes on *Acacia* (Leguminosae: Mimosoideae) chiefly from northern Australia. *Austrobaileya* 5(2): 307–321. Species are referred to sections recognised by Pedley (1978). *Acacia Abbatiana, A.arbiana, A. barakulensis, A. hendersonii, A. rubricola* (sect. *Phyllodineae*), *A. argyrotricha, A. johannis, A. convallium* (sect. *Plurinerves*), *A. abbatiana, A. burdekensis, A. faucium, A. filipes, A. fodinalis, A. lacertensis, A. proiantha, A. scopularum* and *A. solenota* (sect. *Juliflorae*) are described as new. *A. tingoorensis* nom. et stat. nov. is based on *A. longispicata* subsp. *velutina Pedley*. Notes on affinities, distributions and habitats of all species are given. Variation within *A. leiocalyx* (Domin) Pedley is discussed and a wide area of intergrade between *A. fodinalis* and *A. cretata* Pedley is postulated.

Keywords: *Acacia* – Australia; Queensland; Northern Territory.

Les Pedley, c/- Queensland Herbarium Brisbane Botanic Gardens Mt Coot-tha, Mt Coot-tha Road, Toowong, Queensland 4066, Australia.

Introduction

With the approaching treatment of *Acacia* in Volumes 11A & 11B of the *Flora of Australia* it has become necessary to validate names of some species from Queensland and the Northern Territory included there, and some others that will not be included. Several of the species are closely related to *A. leiocalyx* (Domin) Pedley and variation within that species is discussed. The species are referred to sections according to the classification of Pedley (1978). Other species described here were recognised as distinct after editing of the two volumes of the Flora began and therefore cannot be included in it. These species are indicated by an asterisk (*). In the Flora, for the most part, they are included in rather wide circumscriptions of other species.

Acacia sect. **Phyllodineae** DC., Prodr. 2: 448 (1825).

Acacia arbiana Pedley, **sp. nov.** ex affinitate *A.confertae* A. Cunn. ex Benth. et specierum affinium distinguenda phyllodiis distincte mucronulatis, angustioribus, elongatioribus, floribus aliquantum grandioribus corollae lobis longioribus praeditis. **Typus:** Queensland. LEICHHARDT DISTRICT: Ropers Peak, 22°52'S 148°13'E, alt. 780 m, 23 August 1990, *P.I. Forster* PIF7209 (holo: BRI; iso: AD, BRI, CANB, DNA, K, MEL, MO, NSW, PERTH, PRE, Z).

Acacia sp. (Ropers Peak P.I. Forster PIF7209) (Pedley 1997).

Spreading shrub to 1.5 m tall with black stems; branchlets, hidden by phyllodes, glabrous or with scattered loosely appressed hairs, ribbed by decurrent bases of phyllodes. Phyllodes linear, straight or slightly curved, narrowed into a longish curved mucro, crowded, spirally arranged, sometimes in pseudo-whorls, 8–16 mm long, 0.6–0.8 mm wide, thick without obvious nerves, narrowed into a longish curved mucro, with sparse, loose, ± appressed hairs, c. 0.6 mm long, particularly on abaxial margin when young, glabrescent, apparently exstipulate but with minute red-brown trichomes in stipular position; pulvinus c. 0.5 mm long. Heads of 24–30 flowers on single axillary peduncles 8–10 mm long, projecting beyond the foliage, peduncle occasionally with 1 or 2 bracts below the head. Flowers 5-merous, subtended by bracteoles as long as the calyx with thick oblique pubescent lamina as long as the claw; calyx c. 1 mm long, lobes about one-third of total length, ciliate, often with a stouter brown trichome at the tip; petals obovate, c. 2

Accepted for publication 3 September 1998

mm long, united to about the middle, glabrous; stamens c. 5 mm long; ovary glabrous. Pods similar to those of *A. conferta*, up to 4.5 cm long, 10–14 mm wide, valves rather membranous, finely reticulately veined, somewhat glaucous, convex over the seeds; seeds transverse, mature ones not seen.

***Specimens (all BRI)*: Queensland.** LEICHHARDT DISTRICT: Ropers Peak, May 1987, *Bean* 569 & Aug 1987, *Bean* 630; Scotts Peak, 22°51'S 148°13'E, alt. 570 m, Jun 1951, *Everist* 4427; Peak Range, c. 30 km SW of Dysart, Jan 1981, *Podlich* s.n. (AQ 348047).

***Distribution and habitat*:** The species is confined to Ropers and Scotts Peak and perhaps other peaks of the Peak Range, east of Clermont. It is recorded from trachyte outcrops where it is a component of heath-like vegetation with *Phebalium glandulosum* Hook., *Corymbia trachyphloia* (F.Muell.) K.D. Hill & L.A.S. Johnson, *Bertya pedicellata* F.Muell., *Acacia gnidium* Benth., *Dodonaea filifolia* Hook., *Callistemon* sp. and *Zieria aspalathoides* A. Cunn. ex Benth.

***Affinities*:** *Acacia arbiana* is close to *A. conferta*, but its phyllodes are more crowded, longer, narrower and distinctly mucronulate with long loosely appressed hairs, and it also lacks stipules. Its phyllodes resemble those of *A. gittinsii* which has spreading hairs on the stems, some heads in racemes and longitudinal seeds.

***Etymology*:** The specific epithet is derived from the initial letters of the names of Mr A.R. (Tony) Bean whose flowering specimens collected in 1987 clearly indicated the species to be undescribed.

***Acacia barakulensis** Pedley, **sp. nov.** affinis *A. burbidgeae* Pedley a qua ramulosorum pilis aliquantum sparsioribus brevioribusque, phyllodiis brevioribus apice mucrone obliquiore pulvino 0.5–1 mm longo, plerumque brevioribus nervis marginalibus minus prominentibus ornatis, capitulis in pedunculis longioribus differt. **Typus:** Queensland. DARLING DOWNS DISTRICT: Barakula State Forest, 26°26'S 150°31'E, 18 August 1971, *L.A.Nielsen* 15 (holo: BRI).

Acacia barakulensis Pedley ex Lithgow, 60 Wattles of the Chinchilla and Murilla Shires: 46 t.32 (1997), nom. invalid., no Latin diagnosis or description.

Acacia sp. (Barakula L.A. Nielsen 15) (Pedley 1997).

Shrub to c. 2 m high; branchlets brown, resinous, ribbed, sparsely pubescent; stipules setaceous, 0.3–0.6 mm long, persistent. Phyllodes sometimes in pseuowhorls, borne on short projections from ribs of branchlets, terete or somewhat laterally compressed, linear, ± straight, 10–22(–28) mm long, 0.6–1 mm thick, somewhat irregularly tuberculate with a few hairs, an inconspicuous yellowish nerve on ab- and adaxial surfaces with (when dry), a distinct lateral furrow between them and usually some obscure longitudinal folds; mucro oblique (sometimes perpendicular), 0.1–0.3 mm long; pulvinus 0.5–1 mm long; a single minute gland behind the mucro. Heads c. 9 mm diam. of (20–)25–35 flowers on ebracteate peduncles 6–10 mm long, single in the upper axils. Flowers 5-merous; calyx 0.7–0.8 mm long with wide obtuse lobes 0.2–0.3 mm long, a few short hairs at their tips; corolla 1.7–1.8 mm long, lobed to the middle, glabrous; stamens c. 4 mm long; ovary glabrous. Pods linear, ± straight, slightly contacted between the seeds and slightly convex over them, to c. 40 mm long, 4 mm wide, valves rather chartaceous, brown, resinous, reticulately nerved, marginal nerves prominent. Seeds longitudinal, 3.7–4.2 mm long, 2–2.4 mm wide, brown; areole darker, large; pleurogram constricted but open; funicle filiform, creamy yellow, thickened into a clavate aril. *Waajie Wattle.*

***Selected specimens (all BRI)*: Queensland.** DARLING DOWNS DISTRICT: 16–24 km N of Miles, Jul 1980, *Hando* 143; Woojie [sic] flower area, Panda Lane, c. 30 miles [48 km] NW of Barakula Forestry Station, Aug 1981 (flowers) & Nov 1981 (pods), *Lithgow* 913; S.F.R. 16 *Malcolm*, N of Chinchilla, in 1958, *Cameron* QFD59/84.

***Distribution and habitat*:** The species occurs only in the Barakula State Forest north of Chinchilla on sandy soils in eucalypt communities. It flowers August–September and pods have been collected in November.

***Affinities*:** The nearest relative of *A. barakulensis* is *A. burbidgeae* but it is distinguished by its shorter phyllodes with

usually more oblique mucro and its heads on longer peduncles.

Etymology: The specific epithet is derived from Barakula the only known locality of occurrence of the species.

***Acacia hendersonii** Pedley, **sp. nov.** ab *A. johnsonii* Pedley ramulis glabris phyllodiis juventate midnervo translucente ornatis in pulvinum brevem abrupte contractis mucrone minori praeditis, capitulis in pedunculis longioribus portatis differt; ab *A. resinicostata* Pedley phyllodiis pulvino brevi praeditis (non sessilibus) tenuioribus longioribusque differt. **Typus:** Queensland. LEICHHARDT DISTRICT: Blackdown Tableland c. 32 km SE of Blackwater, 23°50'S 149°05'E, alt. 600 m, 11 September 1971, *R.J. Henderson, L. Durrington & P.R. Sharpe* H1199 (holo: BRI).

Acacia sp. (Blackdown Tableland R.J. Henderson+ H1199) (Pedley 1997).

Spreading, much-branched shrub to 3 m tall; branchlets slender, resinous, glabrous, prominently ribbed, the ribs tuberculate; stipules subulate, 0.8–1 mm long, persistent. Phyllodes flat but thick, linear, straight or slightly decurved at apex or distinctly sigmoid, (6–)12–22 mm long, 0.7–1.1 mm wide, (8–)15–22 times longer than wide, glabrous, one vein prominent on each face, yellow and translucent on young (dark) phyllodes, raised and opaque on older ones, margins thickened, a distinct narrow longitudinal depression between midrib and margins on dried phyllodes; a short oblique mucro at apex; abruptly narrowed into pulvinus 0.2–0.5 mm long; a small gland up to 1 mm from base and a second smaller one at apex behind mucro. Heads of 30–35 flowers on ebracteate peduncles 9–15 mm long, single in upper axils; bracteoles spathulate, c. 1.2 mm long. Flowers 5-merous; calyx glabrous, c. 1.2 mm long, lobed to c. ⅓ length; corolla glabrous, 1.7–2.2 mm long, lobed to middle; stamens c. 3 mm long; ovary glabrous or minutely papillose towards top. Pod not seen.

Other specimens (all BRI): **Queensland.** LEICHHARDT DISTRICT: Blackdown Tableland, Aug 1966, *Gittins* 1184; ditto, Aug 1973, *Trapnell & Williams* 40; ditto, Sep 1971, *Henderson* et al. H1077; Blackdown Tableland, 23°48'S 149°08'E, Sep 1988, *J.G.Simmons & M.H.Simmons* 2058.

Distribution and habitat: The species is confined to Blackdown Tableland, an isolated sandstone plateau with an interesting flora, including the endemic, or near-endemic, species *Acacia gittinsii* Pedley, *A. storyi* Tindale, *Corymbia bunites* (Brooker & A.R.Bean) K.D. Hill & L.A.S. Johnson, *Eucalyptus mensalis* L.A.S. Johnson & K.D. Hill and *E. sphaerocarpa* L.A.S. Johnson & Blaxell.

Affinities: *Acacia hendersonii* is one of a group of closely interrelated species that includes *A. barakulensis, A. burbidgeae* Pedley, *A. johnsonii, A. pilligaensis* Maiden, *A. resinicostata* and *A. rubricola* Pedley. It most closely resembles *A. johnsonii* but differs in having glabrous branchlets, phyllodes with translucent midribs when young, abruptly contracted into a short pulvinus, with a smaller mucro and heads borne on longer peduncles. It also has some affinity with *A. resinicostata* but differs in its finer and longer phyllodes which are not sessile but have pulvinuses 0.2–0.5 mm long.

Etymology: The specific epithet honours my friend and colleague Mr R.J.F.Henderson who not only was joint collector of the type on the first organised expedition to collect plants of the Blackdown Tableland, but also a noted systematist specialising in Liliaceae (sensu latissimo) (for example, Henderson 1987).

***Acacia rubricola** Pedley, **sp. nov.** affinis *A. johnsonii* Pedley a qua phyllodiis vix pubescentibus minus crassis plerumque longioribus midnervo translucenti flavido ornatis, ramulorum pilis aliquantum brevioribus, leguminibus saepe angustioribus differt. **Typus:** Queensland. BURNETT DISTRICT: 6.7 km along Gurgeena Plateau road, 25°29'S 151°23'E, 23 August 1989, *P.I.Forster* PIF5650 (holo:BRI; iso (n.v.): CANB, MEL, PERTH).

Heavily foliaged, much branched shrub to 2 m high; branchlets ribbed, with phyllodes borne on projections of ribs, resinous,

hispidulous with stiff straight hairs 0.1–0.2 mm long; stipules narrowly triangular, c. 0.5 mm long. Phyllodes flat, linear, straight or slightly sigmoid, narrowed from about the middle to base, 20–43 mm long, 1–1.8(–2.1) mm wide, 13–30 times longer than wide, a single translucent yellow longitudinal nerve prominent on each face, with additional obscure longitudinal folds when dry, marginal nerves irregularly sparsely tuberculate, covered with translucent resin and with a few hairs at and near base when young; gland at base small with thick yellowish rim, a second smaller gland behind mucro; mucro c. 0.5 mm long; pulvinus c. 1 mm long. Heads c. 9 mm diam., of 20–35 flowers on single yellow resinous peduncles 6–8 mm long in the upper axils; peduncle without basal bract but occasionally a bract or flower at about middle of peduncle; bracteoles spathulate, incurved, c. 0.8 mm long. Flowers 5-merous; calyx 0.7–0.9 mm long, divided to about the middle into wide, obtuse lobes, glabrous except for a few minute trichomes at apex of lobes; corolla 1.5–1.7 mm long glabrous; stamens c. 4 mm long; ovary glabrous or with a few hairs at base of style. Pods linear, dark to c. 40 mm long, 2.5 mm wide, dark brown; valves rather chartaceous, raised over seeds. Seeds 3.7–4.5 mm long, 1.6–2 mm wide, longitudinal; areole large, pleurogram open; funicle fine, folded and thickened into cream-coloured clavate aril.

***Other specimens (all BRI)*: Queensland.** Burnett District: Binjour Plateau, near Gayndah, 25°28'S 151°23'E, Oct 1987, *Bean* 673; Mundauran Pocket, Gurgeena Plateau, 25°28'S 151°23'E, Jan 1990, *Forster* PIF6174; State Forest Reserve 130, 2 km NW of Nantglyn, 25°31'S 151°21'E, Sep 1989, *Forster* PIF5734 & *Bean;* Gurgeena Quarry, Aug 1988, *J.G.Simmonds* & *M.H.Simmonds* 2017.

***Distribution and habitat*:** The species is restricted to the Binjour Plateau near Gayndah where it occurs on red loamy soil in eucalypt open-forest or in heath. It flowers from mid-August to September and a fruiting specimen has been collected in January.

***Affinities*:** *Acacia rubricola* is closely related to *A. johnsonii* and duplicates have been distributed under that name. It differs however in having longer, less pubescent, somewhat resinous phyllodes with quite conspicuous yellow translucent midnerves and branchlets with shorter hairs, and narrower pods, though I have seen few mature pods of either *A. johnsonii* or *A. rubricola.*

***Etymology*:** The specific epithet is derived from Latin *rubrica*, red earth, and *-cola*, inhabitant, an allusion to the occurrence of the species on red soils.

Acacia sect. **Plurinerves** (Benth.) Maiden & Betche, Census Pl. NSW 93 (1916)

Acacia argyrotricha Pedley, **sp. nov.** affinis *A. rigenti* A. Cunn. ex G. Don, a qua ramulis angularibus non costatis, phyllodiis saepe latioribus, capitulis florum amplioribus in pedunculis parum longioribus portatis, leguminibus plerumque angustioribus et imprimis indumento pilorum 0.5 mm longorum in ramulis, phyllodiis juvenibus (remanenti in frustillis in phyllodiis veteribus), pedunculis leguminibusque differt. **Typus:** Queensland. Darling Downs District: Bracker State Forest, S of Inglewood, 28°36'S 151°02'E, 16 September 1989, *A.R. Bean* 1115 (holo: BRI).

Acacia sp. (Inglewood A.R. Bean 1115) (Pedley 1997).

Shrub to c. 2 m tall, much branched from the base; bark smooth, grey to reddish brown; branchlets angular with dense appressed brown hairs, becoming grey with age, 0.5 mm long; young foliage brownish. Phyllodes linear, flattened, straight or slightly falcate, rather thick, 10–15 cm long, 1–1.8 mm wide, with indumentum of appressed brown hairs when young, glabrescent or hairs becoming white and retained in patches or along midline; mucronulate with usually curved brown mucro 1–2 mm long; gland at base of phyllode; pulvinus stout, c. 1 mm long, usually with appressed indumentum of stems. Heads slightly elongate, deep yellow, of 30–40 flowers in pairs in the upper axils; peduncles 2–2.5 mm long, pubescent, a short stout axis

between them. Flowers 5-merous, each subtended by a concave curved bracteole c. 1.3 mm long; calyx rather stout, obconic c. 1 mm long, lobed to about the middle, the tube with dense hyaline hairs particularly in the upper half, lobes ciliolate; corolla glabrous, c. 1.5 mm long, c. ⅓ lobed, midrib in lower parts of lobes only; stamens 3–4 mm long; ovary glabrous. Pods linear, to 7.5 cm long, c. 2.5 mm wide, somewhat apiculate, with c. 8 seeds; valves coriaceous, brown, raised over the seeds, sparingly veined, with patchy indumentum of silvery appressed hairs c. 0.5 mm long. Seeds longitudinal, oblongoid, 3–4 mm long, 1.7–2 mm across; pleurogram ± distinct, open; areole narrowly oblong; funicle folded and thickened into cupular aril.

Specimens (all BRI, all from type locality): Apr 1989, *Bean* 1023 & *Ballingall* 2542; Aug 1990, *Ballingall* 2579; Dec 1990, *Bean* 2735; s.d., *Ballingall* 2683.

Distribution and habitat: The species is known only from the type locality where it occurs on sandy soil in eucalypt woodland.

Affinities: *Acacia argyrotricha* resembles *A. rigens* but differs notably in the appressed hairs of the branchlets and young phyllodes; the indumentum is often retained in patches on and along the mid-line of old phyllodes. Its flower-heads are larger and borne on longer peduncles.

Etymology: The epithet is from Greek, *argyros*, silvery, and *trichos*, hair, a reference to the silvery indumentum particularly of the pods.

***Acacia johannis** Pedley, **sp. nov.** ex affinitate *A. armillatae* (Pedley) Pedley, *A. legnotae* Pedley, *A. ommatospermae* (Pedley) Pedley; a tribus omnibus phyllodiis elongatioribus, pedunculis filiformibus, leguminibus angustioribus, ab *A. armillata* phyllodiis angustioribus nervis prominentibus longitudinalibus paucioribus pedunculis longioribus, leguminium valvis super semina elevatis, seminibus parvioribus, ab *A. legnota* phyllodiis elongatioribus angustioribus nervis longitudinalibus paucioribus leguminium valvis super semina elevatis, ab *A. ommatosperma* phyllodiis apice non latissimis, pedunculis longioribus, pleurogrammate non prominenti differt. **Typus:** Queensland. Cook District: Mt Mulligan, 16°54'S 144°51'E, alt. 740 m, 13 April 1990, *J.R. Clarkson* 8217 (holo: BRI; iso: K, MBA, MEL, MO, QRS).

Acacia sp. (Mt Mulligan J.R. Clarkson 8217) (Pedley 1997).

Shrub to 2 m tall; bark smooth, grey; branchlets glabrous, reddish brown, ribbed, lenticellate. Phyllodes glabrous, narrowly elliptic, tapering gradually to base and apex, markedly falcate, 14–18 cm long, 5–10 mm wide, 15–30 times as long as wide; glabrous; 3 or occasionally 4 longitudinal nerves prominent, secondary nerves forming open anastomoses between them; acute with a callus point; gland ± prominent on margin at base; pulvinus 1.5–2 mm long. Heads of c. 50 flowers, lemon-yellow, on glabrous filiform peduncles 14–20 mm long, arising from a brachyblastic axis c. 1 mm long at anthesis; axes usually two to each axil occasionally growing out into leafy shoots; bracteoles with a thick peltate shortly pubescent lamina almost perpendicular to the claw, about as long as the calyx. Flowers 5-merous; calyx divided almost to the base into narrow ciliolate spathulate lobes c. 1.5 mm long, the apex thickened; corolla deeply divided into ovate lobes, 1.8–2 mm long, glabrous; stamens 3–4 mm long; ovary glabrous. Pods shortly stipitate, linear, straight, dehiscent, the valves chartaceous, constricted between the seeds and raised over them, alternately on each valve, 7–10 cm long, 4 mm wide at widest part, 2–3 mm at isthmuses, glabrous. Seeds (up to 11 per pod), longitudinally arranged, dark brown, depressed ellipsoidal, c. 3.5 mm × 2.5 mm, pleurogram obscure, closed; funicle thickened forming a small clavate aril.

***Specimens*: Queensland.** Cook District: Mt Pinnacle, SSW of Dimbulah, 17°14'S 145°03'E, Jan 1993, *Bean* 5578 & *Forster* (BRI); 3.3 km, S of the crossing of Shepherd Creek on Maytown track, 15°48'S 144°16'E, Jun 1992, *Clarkson* 9615 & *Neldner* (BRI, MBA); Mt Mulligan, 16°52'S 144°51'E, alt. 700 m, Apr 1985, *Clarkson* 5805 (BRI, K, MBA, MEL, NSW, PERTH) & Apr 1987, *Clarkson* 6927 (BRI, K, MBA, MEL, NSW, PERTH, QRS).

Distribution and habitat: The species is restricted to north-eastern Queensland where

it is common on Mt Mulligan. It occurs on rock outcrops and pavements and in shallow rocky soils derived from sandstone, and is common in places, forming thickets.

Affinities: *Acacia johannis* belongs to what has been termed the Oligoneura group of *Racosperma* (Pedley 1987), equivalent to the Oligoneurae group of *Acacia* (Pedley 1978). It is probably most closely related to *Acacia armillata*, *A. legnota* and *A. ommatosperma*. It differs from *A. armillata* in its more elongate phyllodes with fewer prominent longitudinal nerves, longer peduncles and narrower pods raised over the somewhat smaller seeds; from *A. legnota* in its narrower, more elongate phyllodes with fewer longitudinal nerves, filiform peduncles and narrower pods raised over the seeds; and from *A. ommatosperma* in its less elongate phyllodes not widest near the tip, shorter peduncles and narrower pods.

Etymology: The epithet is derived from the Latin, *Johannes,* John. The species is named in honour of John R. Clarkson (MBA) whose work in far northern Queensland in the last 15 years has significantly increased scientific knowledge of plant species and communities of the region.

Acacia convallium Pedley, **sp. nov.** affinis *A. sericatae* Cunn. ex Benth. et *A. platycarpae* F. Muell.; a illa non denso indumento pilorum brevium manifeste stellatorum in phyllodiis ramulis pedunculisque habenti; a hac areolis nervorum anastomantium phyllodiorum majoribus elongatioribusque, plerumque ramulis pubescentibus non glaucis, pluribus capitulis florum in quoque fasciculo, ab utraque phyllodiis non latissimis supra medium aliquantum acutis differt. **Typus:** Northern Territory. East Alligator River, 12°47'S 133°23'E, 18 July 1972, *N.B. Byrnes* 2750 (holo: BRI; iso (n. v.): CANB, DNA, K, NSW).

Spindly shrub to 5 m tall; branchlets terete with sparse to dense felty indumentum of hairs to 0.2 mm long, sometimes becoming glabrous, or rarely glabrous; stipules deltoid c. 1 mm long. Phyllodes ovate, falcate, 9–17.5 cm long, 1.2–4 cm wide, 3.5–8.5 times longer than wide; with sparse indumentum of weak spreading hairs c. 0.15 mm long, hairs sometimes confined to the base; upper margin often undulate, with two, three or rarely four longitudinal nerves prominent, only one reaching the apex, all running together into the lower margin at the base, oblique secondary nerves forming a reticulum; tapering to a callus point; glands 2–4(–5) on upper margin, small, sometimes projecting, absent from the base; pulvinus 5–10 mm long, with indumentum of branchlets. Inflorescence of up to 7 fascicles of pedunculate heads at anthesis at the one time, on indeterminate axes in the upper axils, the axis up to 10 cm long, with indumentum of branchlets, with immature fascicles crowded at apex; fascicles subtended by a deciduous deltoid bract c. 1 mm long, of 4–6 slender peduncles 12–17(–23) mm long, with indumentum of spreading hairs c. 0.25 mm long, the hairs sometimes confined to base. Heads of c. 30 flowers each subtended by a clawed bracteole, the claw as long as the calyx, the lamina c. 0.5 mm long, obliquely ovate, acute. Flowers 5-merous; calyx lobes free, spathulate, c. 1 mm long, with spreading hairs in upper half; corolla lobed to about the middle, c. 1.6 mm long, the lobes with spreading hairs; stamens c. 3.5 mm long, the filaments cohering in the lower half (especially in male flowers); ovary glabrous. Pods 7–11 cm long, 28–36 mm wide, with woody, glabrous, reticulately nerved valves, the margins forming a 'wing' 2.5–3.5 mm wide. Seeds 8–8.5 mm long, 5.3–6.2 mm wide, 3–3.5 mm thick, transverse, arranged in depressions in the material of the valves; areole large; pleurogram open, well defined; funicle c. 3 times folded and thickened into a stout aril forming a cap over the seed.

Specimens: **Northern Territory.** East Alligator River area, 12°41'S 133°08'E, *Dunlop* 3421 (BRI, DNA, K); 44 km SE of Oenpelli, 12°34'S 133°23'E, *Dunlop* 4926 (BRI, DNA); 14 km NE of Mann River Gorge, 12°39'S 134°08'E, *Leach & Dunlop* 1590 (BRI); Along road to Smith Point, 73.5 km NW of Murgenella, 11°20'S 132°20'E, *McDonald* 421 (BRI).

Distribution and habitat: The species is confined to a small area in the north of the Northern Territory where it usually occurs on sandstone, often in gorges.

***Affinities*:** *Acacia convallium* is allied to *A. sericata* but lacks the stellate hairs so prominent on the phyllodes, branchlets and peduncles of that species, and more closely to *A. platycarpa* but the areoles among the anastomoses of the nerves of its phyllodes are larger and more elongate; its branchlets are usually pubescent, not pruinose; and it has more flower heads in each fascicle in the inflorescence. It differs from both in having somewhat acute phyllodes not widest above the middle. The cohesion of the lower part of the staminal filaments is most unusual in species of *Acacia*.

***Etymology*:** The specific epithet is genitive plural of Latin *convallis*, a valley shut in on all sides, an allusion to the plant's habitat.

Acacia. sect. **Juliflorae** (Benth.) Maiden & Betche, Census Pl. NSW 95 (1916)

***Acacia abbatiana** Pedley, **sp. nov.** *A. graniticae* Maiden similis a qua cortice lamellato, phyllodiis aliquantum brevioribus, inflorescentiis multispicatis, floribus parvioribus (staminibus tantum c. 2.2 m longis) hinc spicis tenuioribus, calyce pilis arachnoideis obtecto, leguminibus brevioribus, seminibus parvioribus pleurogrammate U-formi ornatis differt. **Typus:** Queensland. SOUTH KENNEDY DISTRICT: Mt Abbot, 50 km W of Bowen, 20°06'S 147°46'E, alt. 800 m, 2 August 1992, *A.R.Bean* 4873 (holo: BRI; iso (n.v.): AD, BISH, HO, K, L, MEL, MO, NSW).

Acacia sp., (Mt Abbot A.R.Bean 4873) (Pedley 1997).

Shrub to c. 4 m tall, foliage confined to upper part of plant, lower part of stems bare; bark brown, lamellated (described by collector as 'fibrous'); branchlets pale brown, often with greyish overlay of dead epidermal cells, glabrous, angular. Phyllodes linear, straight, (70–)95–150 mm long, 1.6–3 mm wide, 40–65 times longer than wide, glabrous, with 13–19 parallel non-anastomosing longitudinal nerves, the midnerve slightly more prominent, marginal nerves somewhat thicker than rest, a straight or slightly oblique brown callus point at apex; small gland at base; pulvinus not well defined. Spikes 8–9 mm long, c. 5 mm diam. at anthesis, rachis with scattered curled hairs; peduncles 1–2 mm long, borne in 2s and 3s on a minute axillary shoot, occasionally spikes becoming lateral as shoot elongates; bracteole c. 0.5 mm long, with oblique claw with long hairs on back. Flowers 5-merous; calyx 0.5–0.7 mm long, cupular, membranous, sinuolately lobed, rather dense white arachnoid hairs and a few brown scales on lobes; corolla 1.3–1.5 mm long, glabrous, lobed to middle, lobes uninerved, strongly recurved; stamens 2–2.2 mm long; ovary with a few long stiff hairs towards the apex. Pods to 35 mm long, 2.5 mm wide with up to 8 seeds, pale brown with thick marginal nerves. Seeds longitudinal 2.4–3.2 mm long, 1.3–1.4 mm wide, dark with paler areole; pleurogram U-shaped; funicle pale, once folded, thickened into a small aril capping the seed.

***Other specimens (all BRI)*: Queensland.** SOUTH KENNEDY DISTRICT: Mt Abbot, 20°06'S 147°46'E, alt. 800m, Oct 1992, *Bean* 5196; Mt Abbot, 20°07'S 147°46'E, alt. 400m, Jul 1992, *Bean* 4753.

***Distribution and habitat*:** The species is confined to Mt Abbot where it occurs in heathland on rather steep slopes on skeletal soils derived from granite. Flowering material was collected in August and fruiting in October.

***Affinities*:** *Acacia abbatiana* is closely related to *A. granitica*, and was recorded as such by Bean (1994), but differs in having lamellated bark, somewhat shorter phyllodes, inflorescences of slender spikes on axillary shoots, smaller flowers (stamens to only 2.2 mm long) and calyx with dense arachnoid hairs and shorter pods with smaller seeds.

***Etymology*:** The specific epithet is formed from Latin *abbas, -itis*, abbot, and the suffix *-ana*, indicating position: a reference to Mt Abbot, the only known locality for the species.

***Acacia burdekensis** Pedley **sp. nov.** affinis *A. leiocalyci* (Domin) Pedley a qua habitu arboris usque 9 m altae, phyllodiis forma similis eis *A. leptostachyae* Benth. plerumque elongatioribus, plerumque plus quam 6-plo longioribus quam latis, saepe angustioribus nervis multis

tenuibus parallelis vix anastomantibus ornatis differt. **Typus:** Queensland. North Kennedy District: 8 miles [c. 13 km] W of Pentland, 19 June 1953, *M. Lazarides* 3543 (holo: BRI; iso: CANB (n.v.), PERTH).

Acacia sp. (Torrens Creek C.T. White 8725) (Pedley 1997).

Tree to 9 m tall; bark dark, rough, furrowed or tending to form hard rectangular flakes; branchlets reddish, angular, scurfy, resinous (as are young phyllodes); stipules deltoid, 0.5–0.8 mm long, caducous. Phyllodes somewhat crowded towards the ends of the branches (internodes short), straight to strongly falcate, widest below the middle, (7)9.5–14.5 cm long, 7–18 mm wide, 6–11(–15.5) times longer than wide; glabrous; 2 or 3 longitudinal nerves more prominent than the rest, secondary nerves parallel, rather crowded (30–40 per cm) with some oblique nerves forming anastomoses; tapering to an acute callus point at the apex; gland basal, prominent with distinct swelling and prominent orifice; abruptly contracted to a reddish pulvinus 4–6 mm long. Spikes moderately dense, 25–40(–60) mm long, rachis glabrous, on peduncles 7–12 mm long in pairs in upper axils; bracteoles rather stout 0.4 mm long, caducous. Flowers 5-merous; calyx cupular 0.5–0.75 mm long, lobes 0.1–0.2 mm long, glabrous except for a few minute trichomes on margins of lobes; corolla (1.5–)1.7–2 mm long, glabrous, lobes c. 1 mm long, strongly reflexed; stamens c. 4 mm long; ovary white-hirsute. Pods not seen.

***Specimens (all BRI)*: Queensland.** North Kennedy District: Greenvale Nickel Mine turn off, 18°53'S 144°53'E, Apr 1991, *Batianoff* GV9104106 & *Franks*; 10 km NE of 'Valley of Lagoons' H.S., 18°38'S 145°12'S May 1971, *Blaxell* 503 (ex NSW); Burra Range, Apr 1984, *Brown* 22; Charters Towers - Clermont Road 42 miles [67 km] from Charters Towers, May 1960, *Johnson* 1854; 50 km N of Cape River between Charters Towers and Clermont, Jun 1994, *Esser* s.n. (AQ 627982); 3 km W of Noname Hill, Valley of Lagoons; 18°44'S 145°21'E, Aug 1988, *Mockett* s.n. (AQ 476295); Torrens Creek, Mar 1933, *White* 8725.

***Distribution and habitat*:** The species is largely confined to the northern part of the Burdekin River basin between about 18°30'S and 21°S where it occurs on stony and sandy soils on hillsides and on creek banks.

***Affinities*:** *Acacia burdekensis* has been previously included in a rather heterogeneous *A. leiocalyx* but differs in being a moderately large tree with rather elongate phyllodes similar in shape to those of *A. leptostachya* with fine crowded, only sparingly anastomosing, secondary nerves.

***Etymology*:** The epithet is a contraction of 'burdekin' and Latin *-ensis* indicating the occurrence of the species largely within the northern parts of the basin of the Burdekin River.

***Acacia faucium** Pedley, **sp. nov.** ramulis valde angularibus, phyllodiis pulvino brevi nervis longitudinalibus majoribus basin versus confluentibus *A. leiocalyci* (Domin) Pedley similis autem phyllodiis plerumque longioribus chartaceioribus nervis secondariis pluribus, spicis brevioribus, calyce plerumque pilis hyalinis aliquot basi, valvis leguminis cartilagineis differt. **Typus:** Queensland. North Kennedy District: Bertya Creek, W of "Warang", White Mountains National Park, 20°27'S 144°46'E, 21 June 1992, *A.R.Bean* 4611 (holo:BRI).

Tree to 10 m tall; branchlets acutely angular, somewhat scurfy, with sparse minute (c. 0.1 mm long), appressed hairs on young plants, glabrescent; young growing tips brown; stipules deltoid c. 0.5 mm long, deciduous. Phyllodes straight or somewhat falcate, widest above the middle, 13.5–18 cm long, (16–)20–27 mm wide, 4.5–7.5(–9) times longer than wide; rather chartaceous in texture, glabrous or with sparse appressed hairs c. 0.1 mm long on young plants; 2 or 3 longitudinal nerves more prominent than the rest, confluent with each other near lower margin towards the base, secondary nerves rather crowded (20–25/cm) anastomosing; blunt at apex; gland prominent, basal; tapering into pulvinus 0.5–0.8 mm long. Spikes moderately dense, 35–55 mm long, rachis pruinose, on reddish peduncles 5–8 mm long in pairs in upper axils; bracteoles

c. 0.5 mm long, glabrous, the stipe somewhat longer than the oblique lamina. Flowers 5-merous; calyx rather broad, 0.5–0.8 mm long with obtuse lobes 0.1–0.2 mm long, glabrous or usually with a few spreading hyaline hairs towards the base; corolla 1.7–2 mm long, glabrous, lobed to about the middle, lobes uninerved, strongly reflexed; stamens c. 2.5 mm long; ovary hirsute with white hairs. Pods linear, ± straight, to c. 8 cm long, 3 mm wide, with up to 12 seeds; valves brown-black, cartilaginous, glabrous, somewhat glaucous, obscurely longitudinally wrinkled, raised over seeds, marginal nerves thick, prominent, yellowish; seeds longitudinal, pale brown, 3.5–4 mm long, c. 2 mm wide; areole large; pleurogram not well defined, oblong, closed or almost so; funicle yellow, folded about 3 times and thickened to form cupular aril.

***Selected specimens (all BRI)*: Queensland.** North Kennedy District: Torrens Creek Gorge, White Mountains, 20°28'S 144°55'E, Oct 1991, *Cumming* 11422; 'Warang' Holding, White Mountains, 37 km NNW of Torrens Creek, 20°29'S 144°48'E, Aug 1988, *Fell* DF1369; 88 km NE of Clermont, 22°09'S 148°08'E, Jun 1972, *McDonald* 556; 3 miles [c. 5 km] NE of 'New Twin Hills' H.S., Aug 1964, *Pedley* 1738 (ex CANB).

***Distribution and habitat*:** The species is common in the headwaters of Torrens Creek in White Mountains where it occurs in gorges in sandstone. It also occurs in broken country farther south, about 100 km north of Clermont.

***Affinities*:** *Acacia faucium* is closely allied to *A. leiocalyx* but has usually longer, more chartaceous phyllodes with more widely spaced secondary nerves, shorter spikes, usually a few hairs on the calyx and valves of the pod cartilaginous.

***Etymology*:** The specific epithet is Latin, meaning 'of gorges' a reference to the habitat of the species at the type locality.

Acacia filipes Pedley, **sp. nov.** non prope affinis ullae Australiae borealis speciei, phyllodiis teretibus, calycibus lobatis fere ad basem, leguminibus angustis semina parum obliqua pleurogrammatibus inapertis gerentibus, et praecipue pedunculis perlongis (35–45 mm longis) notabilis. **Typus:** Northern Territory: 21 km N of Jim Jim Falls, near entrance to Deaf Adder Gorge, 13°15'S 132°51'E, 29 May 1980, *M. Lazarides* 9075 (holo: BRI; iso: (n.v.) CANB).

Spreading shrub to c. 1 m tall and 2 m wide; stems smooth, grey; branchlets slender, angular, ribbed, resinous. Phyllodes glabrous, terete (or drying somewhat angular); 8.5–15 cm long, 0.4–0.8 mm diam. with 8 parallel longitudinal nerves and a short oblique callus point; gland basal or up to 5 mm from the base, the phyllode usually slightly bent when gland not at the base; pulvinus 1–1.5 mm long. Spikes in pairs at base of rudimentary axillary shoot, 10–25 mm long on slender peduncles 35–45 mm long; bracteoles as long as the calyx, with a thickened peltate lamina. Flowers 5-merous; calyx glabrous, c. 0.7 mm long, divided almost to the base into oblong obtuse lobes; corolla 1–1.2 mm long, divided to about the middle; stamens c. 3 mm long; ovary glabrous. Pods flat, linear, 4–4.5 cm long, 2.5–3 mm wide; valves slightly resinous, rather woody with raised anastomosing nerves. Seeds (up to 8 per pod), longitudinally to slightly obliquely arranged, dark grey, c. 3 mm long, 1.5 mm wide; pleurogram closed; funicle straight, thickened into a cupular aril similar to that of *A. calyculata*.

***Other specimen*: Northern Territory.** Deaf Adder Gorge, 13°05'S 132°51'E, Feb 1977, *Fox* 2564 (BRI, DNA).

***Distribution and habitat*:** This is evidently a rare species confined to the vicinity of Deaf Adder Gorge where it occurs on the top of the sandstone escarpment.

***Affinities*:** *Acacia filipes* is apparently not closely related to any other species. A combination of attributes (terete phyllodes, long filiform peduncles, deeply lobed calyx, pods with reticulately nerved valves and slightly oblique seeds with a closed pleurogram) sets it apart from all other species known to me. The Fox specimen has finer phyllodes than those of the type and came from a smaller plant but otherwise the two specimens are similar.

***Etymology*:** The epithet is derived from Latin *fili*, thread and *pes*, foot, an allusion to the

long threadlike peduncles of the inflorescence.

***Acacia fodinalis** Pedley, **sp. nov.** affinis *A. leiocalyci* (Domin) Pedley a qua phyllodiis plerumque angustioribus elongatioribus (plus quam 7.5-plo longioribus quam latis), spicis in pedunculis longioribus, leguminibus angustioribus differt. **Typus:** Queensland. Leichhardt District: Norwich Park mine, c. 22°40'S 148°20'E, 8 June 1983, *J. Martin* s.n. [AQ 349851] (holo: BRI).

Acacia sp. (Norwich Park J. Martin AQ 349851) (Pedley 1997).

Tree to 10 m tall with grey-brown coarsely fibrous fissured bark; branchlets reddish, sharply angular, resinous when young, sometimes slightly scurfy, becoming smooth; stipules deltoid, c. 1 mm long, caducous. Phyllodes slightly falcate, tapering equally to each end, 8.5–13 cm long, 8–15 mm wide, 7.5–15 times longer than wide; glabrous; 2 or 3 longitudinal nerves more prominent than the rest tending to run together near adaxial margin near base, secondary longitudinal nerves crowded (25–35 per cm), distinctly anastomosing; apex acute with a callus point; gland at, or within 1 mm of base, prominent, a distinct swelling of margin with a marked orifice. Spikes rather open, (25–)45–70 mm long, rachis glabrous and occasionally glaucous, on peduncles (5–)7–10(–13) mm long in 2s or 4s in upper axils; bracteoles c. 1 mm long, a narrow claw and oblique lamina with a few hairs, caducous. Flowers 5-merous; calyx cupular, glabrous or with a few hairs near the base, 0.5–0.8 mm long, lobes c. 0.1 mm long; corolla c. 1 mm long, glabrous, lobes strongly reflexed; stamens c. 2.5 mm long; ovary white hirsute. Pods linear, ± straight, to c. 45 mm long, 2.3–3 mm wide, dark brown, with marginal nerves yellow; raised over seeds and slightly constricted between them. Seeds longitudinal, light brown, c. 3.5 mm long, 1.7–2 mm wide; areole large, pale; pleurogram rectangular, open; funicle folded c. 3 times, thickened into yellow cupular aril.

***Specimens (all BRI)*: Queensland.** Leichhardt District: 2 miles [c 3 km] N of 'Logan Downs' Stn, Aug 1964, *Adams* 1263 (ex CANB); c. 8 km N of Dysart, Jun 1989, *Anderson* 1011; Riverside coal project, 30 km NW of Moranbah, Aug 1981, *Anon.*; Lake Elphinstone, 21°33'S 148°13'E, Jul 1985, *Champion* 146; 17 miles [27 km] E of 'Pasha' homestead, Jul 1964, *Pedley* 1727A (ex CANB). South Kennedy District: Peak Downs Highway at top of Eton Range, 21°S 148°52'E, *Champion* 1341 & Ritchie.

***Distribution and habitat*:** The species occurs in the upper part of the Isaacs River basin and adjacent part of the Belyando River basin where it occurs usually on sandy soils often associated with *Eucalytpus crebra*.

***Affinities*:** *Acacia fodinalis* is closely related to *A. leiocalyx* but develops into a larger plant with usually narrower and more elongate phyllodes (more than 7.5 times longer than wide), spikes on longer peduncles, and narrower pods.

***Etymology*:** The specific epithet is derived from Latin *fodina*, a pit or mine, and the suffix *-alis*, pertaining or belonging to, an allusion to the large colleries in the geographic range of the species.

Acacia lacertensis Pedley, **sp. nov.** prope affinis *A. tropicae* Tindale a qua phyllodiis angustioribus minus crassis plerumque 2-nervibus, pedunculis spicarum brevioribus, spicis brevioribus, probabiliter leguminibus longioribus angustioribusque semina parviora gerentibus differt. **Typus:** Northern Territory. Narbalek, 12°19'S 133°19'E, 30 August 1988, *R. Hinz* 51 (holo: BRI (2 sheets); iso (n.v.): AD, CANB, DNA, MEL, NSW, PERTH).

Slender tree with sparse canopy to 8 m tall; bark grey-brown; branchlets stout, angular, glabrous, pruinose; young tips dark. Stipules deltoid, c. 1 mm long, caducous. Phyllodes straight or somewhat sigmoid, attenuate at the base, 12.5–17(–20) cm long, 1–2(–2.5) cm wide, 6.5–12 times longer than wide, glabrous, rather thin in texture with fine, widely spaced (c. 0.5 mm apart in middle of phyllode) longitudinal nerves, two or occasionally three more prominent, these running together in middle of phyllode at its base; obtuse at the apex with a caducous callus; gland at base of phyllode not prominent; pulvinus 5–14 mm

long. Spikes golden-yellow (*Chippendale* NT 8094), in pairs at base of rudimentary shoot in upper axils, 4–5 cm long on peduncles 5–8 mm long. Flowers 5-merous; calyx 0.4–0.5 mm long, broadly cupular, lobed to about the middle, the lobes wide, obtuse, glabrous or fimbriate, with a few hairs towards base of the tube; corolla 1.4–1.6 mm long, lobed to about the middle, glabrous; stamens 3–4 mm long; ovary sparsely sericeous. Pods ± straight, 8–9 cm long, 3.5 mm wide with up to 12 seeds; valves convex over the seeds, with prominent marginal nerves. Seeds obloid, 3.8–4.5 mm long, 1.7–2.3 mm wide; pleurogram open; areole oblong, 2.8–3.5 mm long, c. 1 mm wide; funicle thickened and folded, forming cupular aril beneath the seed.

***Specimens*: Northern Territory.** East Alligator River, 12°47'S 133°23'E, Jul 1972, *Byrnes* 2751 (BRI, DNA); Narbalek, Cooper Creek, 12°19'S 133°19'E, *Hinz* 597 (BRI); Cooper Creek, 28 miles [45 km] N of Oenpelli, Jul 1962, Chippendale NT 8094 (BRI, DNA); 17.8 km along turn-off to Murgenella, Cooper Creek, 12°06'S 133°11'E, Sep 1987, *McDonald* MM 413. (BRI).

***Distribution and habitat*:** The species has been recorded only from sandy banks of the East Alligator River and its tributary Cooper Creek.

***Affinities*:** *Acacia lacertensis* and *A. tropica* are closely related. The most obvious differences between them are the texture of the phyllodes and the prominence of the nerves. The significance of the differences in pods and seeds is difficult to assess as only one fruiting specimen of *A. tropica* has been examined and the specimen is not a good representative of the species. It is George Creek, 18°15'S 137°16'E, 12 Sep 1967, *A. Nicholls* 733 (BRI; distributed from DNA as *Acacia* sp. aff. *A. gonoclada*). It has pods which are somewhat immature, about 60 mm long and 5 mm wide with dark valves with lighter nerve-like margins and longitudinal seeds. The single seed examined (not quite mature) is 4.8 mm long, 2.5 mm wide with a oblong areole; the pleurogram is pale and open, and the funicle thickened and folded to form a cupular aril beneath the seed.

***Etymology*:** The specific epithet is derived from Latin *lacerta*, lizard and the suffix *-ensis* indicating place of origin: a rather indirect reference to the Alligator River. English *alligator* is a corruption of the Spanish *el lagerta* which is derived from the Latin *lacerta*.

Acacia leiocalyx (Domin) Pedley, Contrib. Qld Herb. 15:10 (1974), Austrobaileya 1:179 (1978); *A. glaucescens* var. *leiocalyx* Domin, Bibliothec. Bot. 89:269 (1926). **Type:** Queensland, prope Brisbane River, *Amalia Dietrich* 568 (ex museo Godeffroy Hamburgensi 5068) (lecto: PR527897, *fide* Pedley, 1974).

Acacia leiocalyx is widespread in subtropical Queensland from the coast west to about 147°E longitude and in north-eastern New South Wales. It is particularly common in south-eastern Queensland where it is sympatric with *A. concurrens* Pedley. It is conspicuous on coastal dunes but away from the coast it is less so. There it usually occurs on shallower soils on steeper slopes than does *A. concurrens*. Prior to 1974 the two were not formally distinguished and were both referred to as *A. cunninghamii* Hook.f., an illegitimate name. *A. leiocalyx* differs from *A. concurrens* in having smooth (not scurfy), sharply angular, often reddish branchlets, shorter pulvinuses and completely glabrous calyxes. It flowers earlier in the year than *A. concurrens*, though in some areas it may flower synchronously and hybrids between the two are suspected to occur in north-eastern New South Wales and on the northern outskirts of Brisbane. Populations of *A. leiocalyx* west of the Dividing Range often begin to flower earlier than populations east of the range at the same latitude and elevation, have longer periods of flowering and deeper yellow flowering spikes. Plants from the two regions are morphologically similar. *A. leiocalyx* subsp. *herveyensis* is distinguished from *A. leiocalyx* subsp. *leiocalyx* by its narrow phyllodes widest below the middle, long attenuate to the apex which is slightly thickened. The subspecies form mixed stands, particularly between Bundaberg and Maryborough, but subsp. *herveyensis* stands out, not only on account of its narrower phyllodes but also because it flowers later than subsp. leiocalyx. Some workers, for example Tame (1992) do not recognise subsp. *herveyensis*.

Plants from subcoastal regions north of the Tropic of Capricorn identified as *A. leiocalyx* have been a puzzle. Pedley (1978)

referred to a variant from 'a small area in central Queensland' with 'remarkably consistent narrower phyllodes'. Collections made since that time revealed that the situation is more complex than believed. Consideration of these more recent collections and re-appraisal of some old ones resulted in the recognition of *A. burdekensis, A. fodinalis* and *A. faucium*. The last is a distinctive species but the others are close to *A. leiocalyx,* distinguished from it in having more elongate, usually narrower phyllodes, often with more crowded secondary longitudinal nerves, longer pulvinuses, and at least some flowers in the inflorescence with a few erect hyaline hairs at the base of the calyx. Mature plants of both species are larger than those of *A. leiocalyx*. Though the distinctions between the two species and between them and *A. leiocalyx* are on occasions rather nebulous they do warrant recognition, if only in providing a basis for further studies, especially in the field. Such studies should also include *A. crassa* Pedley and *A. longispicata* Benth. which are sympatric with some of these species.

Even with the recognition of the species mentioned above, many collections, including those of the variant with narrow phyllodes originally noted, cannot be referred to any of the species. Having studied populations of them in the Emerald-Blackwater-Duaringa area, I consider these specimens represent intergrades between *Acacia cretata* Pedley and *A. fodinalis*. *A. cretata* on the Blackdown Tableland has stout angular pulverulent branchlets, large phyllodes abruptly contracted into short pulvinuses and long spikes. At lower altitudes along the northern edge of the Tableland, plants with more slender glaucous branchlets, somewhat smaller phyllodes tapering into longer pulvinuses, and shorter inflorescences occur. These may conveniently be considered *A. cretata*. Other plants, however, lack the extreme characters of *A. cretata* though angular glaucous branchlets invariably occur; these are considered to be the intergrades with *A. fodinalis*. The zone of intergradation is an arc some 80–100 km wide from the north-west to the north-east of Blackdown Tableland.

Acacia proiantha Pedley, **sp. nov.** non arcte speciebus ceteris *Acaciae* sectionis *Juliflorae* affinis ; phyllodiis 11–17.5 cm longis, 1–1.5 mm latis nervum medium ceteris prominentiorem habientibus, floribus parvis petala c. 1 mm longa gerentibus, leguminibus aliquantum moniliformis valvis reticulatim nervatis, seminibus parvis c. 2.6 mm longis et 1.6 mm latis insignis. **Typus:** Northern Territory. c. 2.5 miles [4 km] SW of Mt Gilruth, 13°03'S 133°02'E, 28 February 1973, *M. Lazarides* 7938 (holo: BRI; iso (n.v.): CANB).

Erect spindly shrub with sparse canopy to c. 3 m tall; stems smooth, grey; branchlets angular, glabrous, slightly resinous; young tips also resinous. Phyllodes rather thick, linear, 11–17.5 cm long, 1–1.5 mm wide; glabrous; one longitudinal nerve forming a midrib, with 4–6 less prominent non-anastomosing nerves on each side of it; acute at the apex with a deciduous callus point; gland basal, inconspicuous; pulvinus 1.5–3 mm long. Spikes single at the base of a rudimentary axillary shoot, 15–20 mm long, on peduncles 4–6 mm long, the peduncle and axis somewhat resinous; bracteoles as long as the calyx, with a narrow claw and lamina peltate, thickened. Flowers 5-merous; calyx broadly cupular, somewhat resinous, 0.4–0.6 mm long, lobed to the middle, the lobes thick, obtuse, sometimes with a few marginal hairs; corolla 0.9–1.1 mm long, lobed to the middle, glabrous. Pods straight, linear acute at the tip, the valves rather thick with raised reticulate nerves, constricted between the seeds and raised over them, to 6.5 cm long, 2.5 mm wide at widest part, 1.5 mm wide at isthmuses, glabrous, slightly resinous. Seeds (8 per pod) longitudinally arranged, obloid, c. 2.6 mm long, 1.6 mm wide; areole pale, narrow, oblong; pleurogram obscure, open; funicle thickened into pale aril folded twice beneath the seed.

***Specimens*: Northern Territory.** 3 miles [5 km] E of Jim Jim Falls, Jul 1972, *Byrnes* 2724 (BRI, DNA, K); Deaf Adder Gorge, 13°02'S 133°05'E, Feb 1977, *Fox* 2519 (BRI, DNA).

***Distribution and habitat*:** The species is restricted to the northern part of the Northern Territory where it occurs on sandstone.

***Affinities*:** *Acacia proiantha* is not closely related to any other species of *Acacia* sect. *Juliflorae*. It has long narrow phyllodes with one nerve more

prominent than the rest, forming a distinct midrib; its flowers are small with petals only about 1 mm long; and its pods are somewhat moniliform with small longitudinal seeds.

Etymology: The epithet is derived from Greek *prois*, early in the year, and *anthos*, a flower, an allusion to the February flowering of the species.

Acacia scopularum Pedley, **sp. nov.** affinitatis incertae *A. spirorbi* subsp. *solandri* (Benth.) Pedley propter amplitudinem formamque phyllodiorum, spicas interruptas in pedunculo brevi primo adspectu simile, sed nervis longitudinalibus phyllodiorum non crebris, floribus 4-meris, petalis multo brevioribus, ovario glabro, leguminibus non torsivis differt. Arbor vel frutex usque 5 m altus. Phyllodia glabra linearia, parum falcata, 7–11 cm longa, 4.5–6 mm lata, 15–20-plo latis longiora; nervis longitudinalibus 8–14 late separatis aliquando anastomosantibus instructa; pulvinus 1.5–2.5 mm longus. Flores 4-meri; calyx 0.5 mm longus, non nisi leviter lobatus; corolla 1.5 mm longa; ovarium glabrum. Legumina linearia, leviter constricta inter semina et convexa super ea, usque 9 cm longa, 2 mm lata, valvis reticulatim nervatis et marginibus incrassatis praedita; seminia parva in longitudinem disposita. **Typus:** Northern Territory. ESE of Mudginbarry, 12°36'S 132°58'E, 19 February 1973, *C.R. Dunlop* 3313 (holo: BRI; iso (n.v.): CANB, DNA, MEL).

Tree or large shrub, branches sometimes sprawling, to 5 m high; bark rough, fissured; branchlets dark red, angular, glabrous; stipules minute or absent. Phyllodes narrow, lanceolate falcate, widest above the middle, 7–11 cm long, 4.5–6 mm wide, 15–20 times longer than wide, glabrous; a callus point, sometimes oblique at the apex; with 8–14 widely spaced (0.3–0.5 mm apart) longitudinal nerves, an occasional anastomose; gland at the base; pulvinus 1.5–2.5 mm long. Flowers in interrupted spikes 3.5–4.5 cm long in pairs, with a rudimentary axis between them, in the upper axils; rachis glabrous; peduncles 1.5–2 mm long. Flowers 4-merous; calyx 0.5 mm long, only shortly lobed, glabrous except for a few short hairs on the lobes; corolla lobed to the level of the calyx, c. 1.5 mm long, lobes with a distinct midrib, strongly reflexed; stamens c. 2.5 mm long; ovary glabrous. Pods glabrous, linear, straight or slightly curved, with up to 15 seeds, 8–9 cm long, 2 mm wide, valves reticulately veined with thickened margins raised over the seeds. Seeds longitudinal obloid, 2–2.5 mm long, 1.5–1.7 mm wide; areole large, oblong; pleurogram conspicuous, open; funicle folded, thickened into small yellow cupular aril.

***Specimens*: Northern Territory.** Radon Creek, Mt Brockman, 12°45'S 132°56'E, *Dunlop* 4679 (BRI, DNA); Little Nourlangie Rock, 12°51'S 132°50'E, *Fox* 2568 (BRI, DNA); Deaf Adder Gorge, 13°02'S 133°05'E, *Fox* 2433 (BRI, DNA); 'Common Rock' Creek, Jabiluka Outlier, *Waterhouse* 9620 (BRI).

Distribution and habitat: The species is restricted to a small area in the northern part of the Northern Territory where it is found in shallow soils often on tops of cliffs.

Affinities: The relationships of *A. scopulorum* are not at all clear. In general appearance it resembles *A. spirorbis* and *A. leptostachya*, and has been distributed from DNA as the latter, but differs from both in its small 4-merous flowers. On the other hand, it does not appear to be particularly close to the 4-merous juliflorous species of south-eastern Queensland (Pedley 1964).

Etymology: The specific epithet is genitive plural of Latin *scopulus*, a rock or cliff, a reference to the habitat of the species.

***Acacia solenota** Pedley, **sp. nov.** quoad ramulos complanatos, florium structuram amplitudinemque, inflorescentias paene albas, semina parva funiculo recto *A. calyculatae* A.Cunn. ex Benth. similis autem ab ea plantae statura majore (frutex densus usque 5 m altus), cortice fibrosa, phyllodiis saepe brevioribus, latioribus et minus elongatis, praecipue leguminibus angularibus valvis profunde canaliculatis constructis distinguitur. **Typus:** Queensland. Cook District: 11.9 km E of Hopevale-Starcke road, on track to the McIvor River mouth, 15°06'S 145°12'E, 14 August 1984, *J.R. Clarkson* 5475 (holo: BRI; iso: MBA, CANB, DNA, K, MEL, MO, NSW, PERTH, QRS).

Dense spreading shrub to c. 5 m tall, branching from near the base; bark grey-brown, longitudinally fibrous; branchlets glabrous, complanate; young growth reddish brown and scurfy. Phyllodes coriaceous, elliptic, asymmetric, lower margin more or less straight, upper curved, 8–10.5(–12.5) cm long, 15–25(–32) mm wide, 3.2–5.5 times longer than wide; glabrous; with many fine longitudinal non-anastomosing nerves, 2 or 3 more prominent than the rest; obtuse with a small callus mucro; gland at the base of the phyllode inconspicuous; pulvinus 3–7 mm long. Flowers in dense spikes, 25–35 mm long, almost white, on peduncles 6–8 mm long, 1, 2 or 3 in the upper axils, each peduncle subtended by a small ovate bract, rachis glabrous; bracteoles curved, concave, hirsute on the back, about as long as the calyx. Flowers 5-merous; calyx broadly cupular, sinuolately lobed, hirsute at base, c. 0.4 mm long; corolla deeply lobed, glabrous, c. 1.8 mm long, midribs of lobes prominent; stamens c. 3 mm long, ovary glabrous. Pods straight, to 12 cm long, 8–10 mm wide, c. 8 mm thick, woody; valves widest near apex, narrowed to the base, opening elastically from the apex; each valve with a longitudinal dorsal groove c. 3 mm deep. Seeds up to 12 in each pod, longitudinally arranged; none seen but impressions in valves quite plain.

***Specimens*: Queensland.** Cook District: 12.5 km NW of the beach on the track from Starcke Station to McIvor River mouth, 15°04'S 145°09'E, Feb 1984, *Clarkson* 5145 (BRI, K, MBA, MEL, NSW, PERTH, QRS); Leprosy Creek, Cooktown, Oct 1986, *McLean* (AQ441388) (BRI).

***Distribution and habitat*:** The species is confined to Quaternary sand-dunes between Cooktown and Cape Flattery where it occurs, sometimes in dense pure stands, in scrubs.

***Affinities*:** *Acacia solenota* is closely related to *A. calyculata* but is a much larger plant with usually shorter and wider phyllodes and, above all, by the deeply grooved valves of the pod.

***Etymology*:** The epithet is derived from Greek *solen*, *solenos*, channel or pipe or deeply grooved tile, a reference to the characteristically grooved valves of the pod.

***Acacia tingoorensis** Pedley, **comb. et stat. nov.**

Acacia longispicata subsp. *velutina* Pedley, Austrobaileya 1:176(1978). **Type:** Queensland. Burnett District: 12 km [sic] NW of Kingaroy, 26°23'S 151°41'E, 19 August 1973, *L. Pedley* 4134 (holo: BRI; iso: A, B, BRI, CANB, E, L, MO, NSW, PR).

***Distribution and habitat*:** The species is restricted to a low hill some 25 km NW of Kingaroy. It occurs on shallow loamy and sandy soils as understory in eucalypt woodland and forms dense stands in disturbed situations on roadsides.

***Affinities*:** *Acacia tingoorensis* is one of a taxonomically 'difficult' group of species that includes *A. concurrens* Pedley, *A. crassa* Pedley, *A. leiocalyx* and *A. longispicata* Benth. It differs from the last, to which it was referred as a subspecies, in having dense erect velvety (not appressed) hairs on the branchlets extending to the rachis of the spikes. Pods and seeds may provide additional differences but pods of *A. tingoorensis* are unknown to me. Though plants flower every year, all attempts at collecting fruits in the last five or six years have failed.

***Etymology*:** The epithet is derived from Tingoora, the name of the nearest centre of population, some 10 km east of the type locality.

References

BEAN, A.R. (1994). An analysis of the vascular flora of Mt Abbot near Bowen, Queensland. *Proceedings of the Royal Society of Queensland* 104:43–66.

HENDERSON, R.J.F. (1987). Liliaceae (in part) in *Flora of Australia* 45:175–232, 264–268, 281–299, 299–306, 348–350.

PEDLEY, L. (1964). Notes on *Acacia*, chiefly from Queensland, II. *Proceedings of the Royal Society of Queensland* 75:29–35.

—— (1978). A revision of *Acacia* Mill. in Queensland. *Austrobaileya* 1:75–280.

—— (1987). Notes on *Racosperma* Martius (Leguminosae: Mimosoideae), I. *Austrobaileya* 2:321–327.

—— (1997). Mimosaceae. In R.J.F. Henderson (ed.), *Queensland Plants: Names and Distribution.* Brisbane: Queensland Herbarium, Queensland Department of Environment and Heritage.

TAME, T. (1992). *Acacias of southeast Australia.* Kangaroo Press: Kenthurst, NSW.